



LEE'S SUMMIT
MISSOURI
Development Services Department

Development Services Staff Report

File Number	PL2019-247
File Name	PRELIMINARY DEVELOPMENT PLAN – City of Lee’s Summit ground-mounted solar arrays
Applicant	City of Lee’s Summit
Property Address	1971 SE Hamblen Rd, 701 NW Main St, 1751 NE Tudor Rd; and 1399 SW Ward Rd
Planning Commission Date Heard by	August 22, 2019 Planning Commission and City Council
Analyst Checked By	Hector Soto, Jr., AICP, Planning Manager Kent D. Monter, PE, Development Engineering Manager

Public Notification

Pre-application held: multiple held
Neighborhood meeting conducted: none held
Newspaper notification published on: August 3, 2019
Radius notices mailed to properties within 185 feet on: August 7, 2019
Site posted notice on: August 7, 2019

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Attachments

Site plans for the ground-mounted solar array locations – 4 pages
Location Map

1. Project Data and Facts

Project Data	
Applicant/Status	City of Lee's Summit / Owner
Applicant's Representative	Dawn Bell
Location(s) of Property	1971 SE Hamblen Rd 701 NW Main St 1751 NE Tudor Rd 1399 SW Ward Rd
Size of Property	varies
Zoning (Proposed)	1971 SE Hamblen Rd – PI (Planned Industrial) 701 NW Main St – AG (Agricultural) 1751 NE Tudor Rd – AG 1399 SW Ward Rd – PI
Comprehensive Plan Designation	varies
Procedure	<p>The Planning Commission makes a recommendation to the City Council on the preliminary development plan. The City Council takes final action on the preliminary development plan in the form of an ordinance.</p> <p>Duration of Validity: Preliminary development plan approval by the City Council shall not be valid for a period longer than twenty-four (24) months from the date of such approval, unless within such period a final development plan application is submitted. The City Council may grant one extension not exceeding twelve (12) months upon written request.</p>

Current Land Use
<p>All of the subject properties are City-owned and developed with a range of public facilities as follows: 1971 SE Hamblen Rd – Public Works Maintenance Facility 701 NW Main St – High Service (Water) Pump Station 1751 NE Tudor Rd – Tudor Road (Wastewater) Pump Station 1399 SW Ward Rd – South Terminal (Water) Pump Station</p>

Description of Applicant's Request
<p>The City has submitted a preliminary development plan application for the subject sites in order to request modifications to the locations of the ground-mounted arrays on each of the properties. The UDO requires ground-mounted solar arrays to be located in the rear yard of a property. The proposed ground-mounted arrays at the subject locations are located in either the front yard or side yard and thus require modifications for their approval.</p> <p>Please note that the site plan for the Public Works Maintenance Facility shows that both ground-mounted and roof-mounted solar arrays are proposed to be installed. Only the ground-mounted array</p>

is the subject of this application due to the need for a modification; the roof-mounted array depicted on the site plan is not a part of this application. The proposed roof-mounted array complies with all UDO requirements and thus may be approved administratively through the final development plan/building permit process.

2. Land Use

Description and Character of Surrounding Area
<p>1971 SE Hamblen Rd – The property is the site of the Public Works Maintenance Facility. The surrounding area is primarily characterized by large acreage industrial property and agricultural property.</p>
<p>701 NW Main St – The property is the site of a subsurface water tank located at the northwest corner of NE Douglas St and NE Chipman Rd. The other three corners of the intersection are the site of a high service pump station to the south and Leigh McKeighan Park to the east and southeast. The property sits at the northern gateway to the downtown area. The property abuts an aboveground City water tank and a single-family residence to the north.</p>
<p>1751 NE Tudor Rd – The property is the site of a wastewater pump station. The surrounding area is characterized by large acreage agricultural property on the south side of NE Tudor Rd and a mix of residential property on the north side of NE Tudor Rd ranging from single-family residential on large acreage to single-family villas.</p>
<p>1399 SW Ward Rd – The property is the site of a water tank. The surrounding area is characterized by existing and future residential development on all sides. The property also abuts the Rock Island Trail.</p>

3. Project Proposal

Setbacks for Ground-Mounted Solar Collectors (Perimeter)

Yard	Required	Proposed
Front	Not allowed	Minimum 12'
Side	Not allowed	Minimum 12'
Rear	12'	Minimum 12'

4. Unified Development Ordinance (UDO)

Section	Description
2.040,2.260,2.300,2.320	Preliminary Development Plans
6.1450	Accessory Uses – Solar Collectors

Unified Development Ordinance

The proposed solar arrays are a specialty accessory use allowed in any zoning district, subject to certain conditions. In the case of ground-mounted arrays, a use condition is that they be located in the rear yard of a property. The arrays proposed on the subject property cannot meet the location condition and thus require approval of a modification as part of this application.

5. Comprehensive Plan

Focus Areas	Goals, Objectives & Policies
Environment	Objective 8.1

Comprehensive Plan

The Comprehensive Plan encourages the balancing of human activity and the natural environment through land use planning and development controls. The proposed arrays provide the City a benefit of using a renewable source of energy to power City infrastructure and various City facilities. Over the life of the solar array system across all City facilities, it is estimated that approximately 106,250 tons of carbon dioxide (CO₂) will be eliminated from the facilities’ footprint.

6. Analysis

Background and History

The City is in the process of entering a twenty (20) year commitment for the installation of solar arrays at various facilities throughout the city. Staff presented an overview of the solar array program and the associated service agreement to the City Council at its August 6, 2019, meeting.

Compatibility

Both roof-mounted and ground-mounted solar arrays are an allowed accessory use in all zoning districts. The subject locations of the proposed ground-mounted arrays are larger acreage City facilities with significant separation from surrounding uses.

Adverse Impacts

Allowing the proposed ground-mounted arrays to be located in a side or front yard is not expected to detrimentally impact the surrounding area. As previously stated, most of the sites are large acreage facilities with significant separation between the array locations and surrounding land uses.

The proposed development will not create excessive storm water runoff. The subject ground-mounted arrays will be located in open grass areas.

Public Services

The proposed ground-mounted array locations will not impede the normal and orderly development and improvement of the surrounding property. Each of the subject facilities are large lots that yield significant separation from the array sites to surrounding properties.

The proposed arrays will have no measurable impact on the surrounding street network. Each of the subject locations is a working site that generates a certain amount of traffic. It is not expected that the proposed arrays will generate any additional traffic to that which currently exists, save for occasional maintenance work.

Certain aspects of the development plan will be further reviewed during the final development plan/building permit phase of the project. This includes detailed aspects of the solar array design to help ensure that the plan meets the design criteria and specifications contained in the Design and Construction Manual.

Modifications

Location.

- Required – ground-mounted arrays shall be located in the rear yard
- Proposed – ground-mounted arrays are proposed to be located as follows:
 - Front yard
 - 701 NW Main St (High Service Water Pump Station)
 - Side yard
 - 1971 SE Hamblen Rd (Public Works Maintenance Facility)
 - 1399 SW Ward Rd (South Terminal Water Pump Station)
 - Front and side yard
 - 1751 NE Tudor Rd (Tudor Road Wastewater Pump Station)
- Recommended – Each of the subject properties has site constraints that do not make it practical or feasible to comply with the condition that the ground-mounted solar arrays be located in the rear yard. Staff supports the requested modifications based on the existing site conditions cited below that impact the location of the solar arrays on the subject properties.
 - **1971 SE Hamblen Rd (Public Works Maintenance Facility)** – The rear yard houses two salt domes and a material storage yard.
 - **701 NW Main St (High Service Water Pump Station)** – There is no building located at this site. The UDO defines a front, side and rear yard based on its location relative to the building on said property. As there is no building located on the property, there is no defined yard. For the purposes of this application, staff considers the proposed location to equate to a front yard location. The subsurface water tank does not meet the UDO’s definition of a building.
 - **1751 NE Tudor Rd (Tudor Road Wastewater Pump Station)** – The rear yard is a heavily treed area traversed by a creek and the site of an identified floodway along said creek.
 - **1399 SW Ward Rd (South Terminal Water Pump Station)** – The rear yard is the site of a water tank and a treed area beyond the current limits of the fence securing the pump station facility.

Recommendation

With the conditions of approval below, the application meets the requirements of the UDO and Design & Construction Manual.

7. Recommended Conditions of Approval

Site Specific

1. A modification shall be granted to the requirement that ground-mounted solar arrays be located in the rear yard, to allow ground-mounted solar arrays to be located in the front and/or side yards as depicted on the accompanying site plans.

Standard Conditions of Approval

2. Solar arrays and associated wiring, foundations, conduit, control boxes, etc., shall be located:
 - a. Outside of any stream buffer, floodplain and floodway;
 - b. A minimum of fifteen (15) feet from any water line, sanitary sewer line, or storm line, as measured from the outside of the pipe; and
 - c. Outside of any easement or right-of-way.
3. Solar arrays and associated wiring, foundations, conduit, control boxes, etc., and any required fencing shall not adversely affect existing stormwater drainage on the site, or adversely affect adjacent property owners.
4. Ground-mounted solar arrays shall be located a minimum 12' from all property lines.